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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/715,414	11/17/2000	Kei Nishioka	81876.0018	5571

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HOGAN & HARTSON L.L.P.
500 S. GRAND AVENUE
SUITE 1900
LOS ANGELES, CA 90071-2611

EXAMINER	
MICHALSKI, JUSTIN I	
ART UNIT	PAPER NUMBER

2644

DATE MAILED: 11/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/715,414

Applicant(s)

NISHIOKA, KEI

Examiner

Justin Michalski

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2000. /
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai et al. (US Patent 5,394,474).

Regarding Claim 1, Hirai et al. discloses a method (Figure 1a) of generating sound data including steps of: storing input/output (signal A) signal in a memory (Hirai et al. discloses delay circuit 12 contains memory) (Column 5, lines 10-17); retrieving said input/output signal stored in memory a predetermined time later (Hirai et al. discloses delaying a signal by a predetermined time) (Column 3, lines 35-45); and adding retrieved input/output signal to said input signal (adder 7) to generate an output signal characterized in that: said input/output signal to be stored in said memory is compressed by compression means before said input/output signal is stored in said memory (compression circuit 11); and said input/output signal retrieved from said memory is expanded by expansion means before said input/output signal is added to said output signal (expansion circuit 1300). Hirai et al. does not disclose the method consisting of digital means. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the method could also be implemented using digital audio signals to obtain a more error free audio data output.

Regarding Claim 2, Hirai et al. discloses an apparatus for generating a sound signal from a signal input thereto (Figure 1a), and providing an output signal derived from said input signal (signal C), said apparatus comprising: compression means for compressing said input/output signal (compression circuit 11); a memory (Hirai et al. discloses delay circuit 12 contains memory) (Column 5, lines 10-17) for storing said compressed input/output signal until said compressed input/output signal is retrieved a predetermined time later (Hirai et al. discloses delaying a signal by a predetermined time) (Column 3, lines 35-45); expansion means for expanding said compressed input/output signal retrieved from said memory (expansion circuit 1300); an adder (adder 7) for adding said expanded input/output signal to the current input signal. Hirai et al. does not disclose the method consisting of digital means. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the method could also be implemented using digital audio signals to obtain a more error free audio data output.

Regarding Claim 4, Hirai et al. further discloses the apparatus comprising a delay time controller (delay circuit 12) for generating a delay time instruction, wherein said predetermined time for retrieving said compressed input/output signal from said memory is controlled by said delay time instruction (Hirai et al. discloses the delay circuit delays a signal by a predetermined time)(i.e. predetermined time value can be changed) (Column 3, lines 40-41).

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai et al. as applied to claim 2 above, and further in view of Yamada (US Patent 6,311,092). As stated above apropos of claim 2 Hirai et al. makes obvious all elements of that claim. Hirai et al. does not disclose compression/expansion means being differential pulse code modulation. Yamada discloses an apparatus (Figure 2) consisting of an encoder (14) decoder (21) and memory (9). Yamada discloses that the signal encoded by encoder to memory is by way of differential pulse code modulation to encode the signal to a smaller signal (Column 3, lines 34-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the use of differential pulse code modulation to encode a signal producing a small amount of data as disclosed by Yamada in order to store a more efficient smaller size signal within the memory.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai et al. as applied to claim 4 above in view of Krause et al. (US Patent 6,304,714). Hirai et al. discloses an apparatus according to claim 4 but does not disclose digital compression means being varied. Krause et al. discloses digital encoding and decoding with variable bit rates to reduce the total amount of storage needed (Column 4, lines 14-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use variable bit compression to reduce the amount of storage needed in memory as taught by Krause et al for a more efficient circuit.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (703)305-5598. The examiner can normally be reached on 8 Hours, 5 day/week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Isen can be reached on (703)305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

JIM


XU MEI
PRIMARY EXAMINER